

We Claim:

1. A dyed fabric with high dye penetration, high dye fixation, and a soft hand, formed by a process comprising the steps of:
 - 5 (a) applying disperse dyes directly to a synthetic-rich fabric, the synthetic-rich fabric having been pre-treated with a wicking agent; and
 - (b) fixing the disperse dyes to the fabric by heating the fabric at between about 350 degrees Fahrenheit for between about 90 and 120 seconds, wherein the finished dyed knitted fabric has a dry crocking index of at least 4.0 and a soft hand.
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2. The fabric of Claim 1 wherein the fabric construction is knitted.
3. The fabric of Claim 1 wherein said wicking agent is Hydrowick®.
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4. The fabric of Claim 1 wherein the disperse dyes are applied by a process selected from the group of processes consisting of rotary screen printing, flat screen printing, and roller printing.
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5. The fabric of Claim 1 wherein said synthetic-rich fabric contains at least 51% polyester.
6. The fabric of Claim 1 wherein the finished dyed fabric has a wet crocking index of at least 4.0.
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7. The fabric of Claim 1 wherein the colorfastness of the finished dyed fabric is 4.0 as measured by the AATCC 61-1996 test method.

8. A garment made of a fabric construction that has a high degree of colorfastness and a soft hand, said fabric construction formed by a process comprising the steps of:

5 (a) applying disperse dyes directly to a synthetic-rich fabric, the synthetic-rich fabric having been pre-treated with a wicking agent; and
(b) fixing the dyestuffs to the fabric by heating the fabric at between about 350 degrees Fahrenheit for between about 90 and 120 seconds, wherein the finished dyed fabric has a crocking index of at least 4.0 and a soft hand.

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9. The garment of Claim 8 wherein the fabric construction is knitted.

10. The garment of Claim 8 wherein the dyestuffs are applied by a process selected from the group of processes consisting of rotary screen printing, flat screen printing, and
15 roller printing.

11. The garment of Claim 8 wherein said synthetic-rich fabric contains at least 51% polyester.

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12. The garment of Claim 8 wherein the finished dyed fabric has a wet crocking index of at least 4.0.

13. The garment of Claim 8 wherein the colorfastness of the finished dyed fabric is 4.0 as measured by the AATCC 61-1996 test method.

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14. A dyed fabric that has a high dye penetration and a soft hand, wherein the finished dyed fabric is synthetic-rich, is printed with disperse dyes, has a wet crocking index of at least 4.0, a dry crocking index of greater than about 4.0, exhibits colorfastness of at least 4.0 as measured by the AATCC 61-1996 test method, and has a soft hand.

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15. The fabric of Claim 14 wherein the fabric construction is knitted.

16. A method of forming a dyed fabric that has a high dye fixation and a soft hand, comprising:

10 (a) applying disperse dyes to a synthetic-rich fabric, the synthetic-rich fabric having been pre-treated with a wicking agent; and
(c) fixing the disperse dyes to the fabric by heating the fabric at between about 350 degrees Fahrenheit for between about 90 and 120 seconds, wherein the finished dyed fabric has a dry crocking index of at least 4.0 and a soft hand.

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17. The method of Claim 16 wherein the synthetic-rich fabric is knitted.

18. The knitted fabric of Claim 16 wherein said wicking agent is Hydrowick®.

20 19. The fabric of Claim 16 wherein the disperse dyes are applied by a process selected from the group of processes consisting of rotary screen printing, flat screen printing, and roller printing.

25 20. The fabric of Claim 16 wherein said synthetic-rich fabric contains at least 51% polyester.

21. The fabric of Claim 16 wherein the finished dyed fabric has a wet crocking index of at least 4.0.

22. The fabric of Claim 16 wherein the colorfastness of the finished dyed fabric is 4.0 as measured by the AATCC 61-1996 test method.

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